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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/547,281	04/12/2000	Hagen Schempf	99146	4983

7590 04/05/2004

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EXAMINER

HOOK, JAMES F

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 04/05/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/547,281

Applicant(s)

SCHEMPF ET AL.

Examiner

James F. Hook

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-21 and 23-85 is/are pending in the application.
- 4a) Of the above claim(s) 2-11, 21 and 23-72 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 and 73-84 is/are allowed.
- 6) ☒ Claim(s) 1, 12, 15-20, and 85 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 12, 15-20, and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smart (783) in view of Penza and Schempf. The patent to Smart discloses the recited multi-module pipe repair/inspection device comprising a base module 12, a module 13 which can be provided with stabilizers 40, a traction module 11 which can include a motor 20 to move the device, a microprocessor provided in the base module, sensors can be provided in various modules including a sensor module 14, and where all the modules are connected by flexible joints that have electrical connections so the modules can talk to one another. However, in column 1, lines 52-64, Smart discloses that the vehicle is made of a plurality of dissimilar individual modules linked by suspension modules in a modular arrangement, and in column 2, lines 14-29 describes that the electrical connections between modules is provided by the suspension modules and that connectors at each end allow electrical connection between all modules to be effected for power and intercommunication requirements. All of this language suggests that the modules connected by suspension modules which

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act as connectors between modules have connectors for the wires, which suggests that they are able to be detached at the connectors, otherwise it would be considered a waste to provide connectors for wires when they could be directly connected in a more permanent manner that would not come apart as easily as a connector. Therefore, it is considered that there is some suggestion in Smart that the modules can be taken apart even though such is not specifically disclosed. The patent to Smart discloses all of the recited structure with the exception of providing a brush module formed with a centrifugal spring biased inward array of brushes and a camera and forming the connections to allow for detaching modules and thereby making them interchangeable. The patent to Penza discloses the recited pipe repair/inspection device comprising a brush module 2 which can be made of steel, and can comprise stabilizers and wheels 3, and a spinning brush head 250 that is provided with radially extending brushes in an array where the brushes are connected by springs to the body to hold the brushes out of contact with the pipe and when the body spins the centrifugal force overcomes the spring force allowing the brushes to contact the wall of the pipe, and where a camera or sensing device can be provided to monitor the pipe and various operations. It would have been obvious to one skilled in the art to modify the device in Smart by providing a brush module with a camera and spring biased brushes to allow for the cleaning away of debris inside the pipe and for inspecting the pipe as suggested by Penza. The patent to Schempf discloses a repair robot made of a plurality of modules where the modules can be held together in such a manner that they can be removably connected so they may be quickly and easily assembled in different arrangements which therefore is the

equivalent of the modules being interchangeable (column 13, lines 5-11. It would have been obvious to one skilled in the art to modify the connection in Smart by forming it of a connection that can be disconnected to allow for interchanging the modules as suggested by Schempf as such will allow the apparatus to be used for various functions rather than limited to only one function.

Response to Arguments

Applicant's arguments filed January 26, 2004 have been fully considered but they are not persuasive. With respect to the teachings of the Smart reference, it is considered that the language in the specification of "other modular configurations" is stating just that, that the modules can be arranged in other configurations. Since such a statement only can have one meaning, then it is obvious that the modules have to be able to be interchanged, and based upon the description of the linkage modules it is apparent that they link the other modules together and with a joint that can be disconnected. It is apparent also that one skilled in the art would interpret this reference in a like manner, and would in light of the teachings of Smart be led to an apparatus that has interchangeable modules connected by linkage modules. Smart may go into details of the modules and not spend much time describing the exact details of the linkage, but based upon the claim language the reference to Smart does meet the limitation of interchangeable modules by describing that the modules can have other configurations than the order set out just before that statement. Therefore, it is not considered hindsight to interpret what the reference is stating. The linkages in Smart also are

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provided to allow for flexible connection of the modules so that the apparatus can bend through pipeline turns, therefore it is considered to meet the limitation of flexible joints.

Allowable Subject Matter

Claims 14 and 73-84 are allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

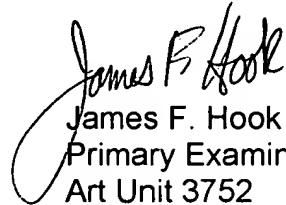
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (703) 308-2913. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.


James F. Hook
Primary Examiner
Art Unit 3752

JFH